

FEEL THE BREEZE

Air conditioners can be self-cleaning

How many times have you cranked up your car's air-conditioning on a hot summer day only to be overwhelmed by a gust of musty air? Thanks to the mold and mildew that inhabit the dark, moist environment of your car's AC system, it is an all-to-common occurrence. The same phenomenon occurs on a larger scale in the heating and air conditioning (HVAC) units of buildings. The air conditioner's interior system is dark, moist and hard to clean—ideal breeding grounds for contaminants that are associated with foul odors and decreased efficiency of the unit. But now, there is a way to suppress the growth of these contaminants. The Environmental Protection Agency (EPA) recently registered copper for use in protecting heating and air conditioner surfaces from bacteria, mold and mildew.

Household items are commonly treated with antimicrobial agents in order to cut down on the growth of bacteria, viruses and fungi found in most homes. These products can be found in almost every room of the house, and include sponges, toothbrushes, toys, and even tissues. Antimicrobial Copper offers a similar solution for heating and air conditioning units in homes, office buildings, schools, cars, airplanes, trains, and other common means of transportation.

Copper has been scientifically shown to suppress the growth of bacteria, mildew and mold in the real world. The EPA registration is complimented by research conducted in the military barracks at Fort Jackson in Columbia, SC. A side-by-side comparison was made between HVAC units outfitted with Antimicrobial Copper components and units using the more common aluminum components. The copper examples inhibited the growth of bacteria, mold and mildew, while the aluminum did not. In addition to causing odors, the build-up of bacteria, mold and mildew can also compromise the long-term efficiency of the unit, making it more expensive to run.

Charles Feigley, Ph.D., Professor of Environmental Health Sciences at the University of South Carolina explained, "Current building and construction methods focus on energy efficiency, which call for a more controlled environment that, in turn, tends to trap bacteria, leading to odors." Copper components are protected from that build up.

The study at Fort Jackson is being funded by the U.S. Department of Defense in conjunction with clinical trials at Memorial Sloan-Kettering Cancer Center in New York City, the Medical University of South Carolina, and the Ralph H. Johnson VA Medical Center, both in Charleston, SC. These hospital studies have shown that antimicrobial copper is also effective in reducing the bacterial load in intensive care unit patient rooms and on many common touch surfaces in those rooms, including bed rails, over-bed tray tables and nurses' call buttons.